ACC NR: AT7003991 SOURCE CODE: UR/0000/66/000/000/0034/0042

AUTHOR: Tsygikalo, A. A.; Kharchenko, Yu. A.

ORG: none

TITLE: Testing the elements of an electrostatic-generator accelerating tube with ring insulators made from new materials

SOURCE: Mezhvuzovskaya konferentsiya po elektronnym uskoritelyam. 5th, Tomsk, 1964. Elektronnyye uskoriteli (Electron accelerators); trudy konferentsii. Moscow, Atomizdat, 1966, 34-42

TOPIC TAGS: electrostatic generator, particle acceleration, accelerating tube

ABSTRACT: The use of slanted electrodes in accelerating tubes (Van de Graaff et al., Nature, 195, 1292, 1962; E. Koltay, Phys., v. 4, no. 2, 66, 1963) permitted drawing the field strength of the tube closer to the electric strength of a single gap. The results of testing tube elements with ring insulators made from non-alkali glass, pyroceram, and epoxy compound are reported; the elements were

Card 1/2

ACC NR: AT7003991

intended for a 5-Mv accelerating tube. Findings: (1) Tested under $(1-3) \times 10^{-6}$ torr vacuum, the elements had these breakdown voltages: porcelain element, 98 kv; nonalkali-glass, 110 kv; pyroceram, 125—200 kv; (2) As some nonalkali-glass insulators suddenly cracked during the tests, the pyroceram insulators should be preferred; (3) Insulators made from epoxy compound seem promising but require further tests. Orig. art. has: 12 figures and 1 table.

SUB CODE: 09 / SUBM DATE: 06Mar66 / ORIG REF: 000 / OTH REF: 002

Card 2/2

TSYGIKALO, A·I.
~~NAUMOV, PAVEL ALEKSEYEVICH~~

TELEGRAFIYZ /TELEGRAPHY, BY/ P A. NAUMOV I A I. TSYGIKALO. MOSKVA., SVYAZ' IZDAT, 1956

V. ILLUS., DIAGRS., GRAPHS, TABLES, INCLUDES BIBLIOGRAPHIES.

YEMEL'YANOV, G. A.; BAZILEVICH, Ye. V.; TSYGIKALS, A.I.; KIRSANOV, V.I.; PEREGUDOV, A.N., otv. red.; DOBRYNINA, A.Ya., red.; MARKOCH, K.G., tekhn. red.

[Telegraphic communication; an informational bulletin] Telegrafnaia sviaz'; informatsionnyi sbornik. Moskva, Gos. izd-vo lit-ry po voprosam sviazi i radio, 1958. 104 p. (MIRA 11:11)

1. Russia(1923- U.S.S.R.)Ministerstvo svyazi. Tekhnicheskoye upravleniye. (Telegraph)

NAUMOV, Pavel Alekseyevich; TSYGIKALO, Arkadiy Iosifovich; TOMASHEVSKIY, B.A. otvetstvennyy redaktor; KOKOSOV, L.V., redaktor; SUSHKEVICH, V.I., tekhnicheskiy redaktor

[Telegraph] Telegrafiia. Moskva, Gos. izd-vo lit-ry po voprosam sviazi i radio. Pt.1. [Principles of telegraphy] Osnovy telegrafii. 1956. 98 p. (MLRA 10:3)
(Telegraph)

TSIGIKALO, A. I.

Operation of telegraph communication; textbook Moskva, Gos. izd-vo lit-ry po voprosam sviazi i radio, 1952. 135 p. (54-15227)

TK5262.C8

ABRAMOVA, N.A., nauchn. sotr.; BEL'CHENKO, G.V., kand. tekhn. nauk; BERENBLIT, V.V., nauchn.sotr.; VASIL'YEV, V.P., kand.khim. nauk; DOBYCHIN, D.P., doktor khim. nauk; IOFFE, B.V., dokt. khim.nauk; KAMINSKIY, Yu.L., nauchn.sotr.; KARPOVA, I.F., kand. khim. nauk; KOPYLEV, B.A., doktor khim. nauk; LUTUGINA, N.V., kand. khim. nauk; MATEROVA, Ye.A., kand. khim. nauk; MORACHEVSKIY, Al.G., kand. khim. nauk; MORACHEVSKIY, An.G., kand. khim. nauk; NIKEROV, A.E., kand. khim. nauk; PAL'M, V.A., kand. khim. nauk; RABINOVICH, V.A., kand. khim. nauk; SOKOLOV, P.N., kand. khim. nauk; FRIDRIKHSBERG, D.A., kand. khim. nauk; TSYGIR, Ye.N., nauchn. sotr.; SHAGITSULTANOVA, G.A., kand. khim. nauk; SHKODIN, A.M., doktor khim. nauk; YATSIMIRSKIY, K.B.; GRIGOROV, O.N., doktor khim. nauk, red.; ZASLAVSKIY, A.I., kand. khim. nauk, red.; MORACHEVSKIY, Yu.V., prof., red.; RACHINSKIY, F.Yu., kand. khim. nauk, red.; POZIN, M.Ye., doktor tekhn. nauk, red.; PORAY-KOSHITS, B.A., doktor khim. nauk, red.; PROTASOV, A.M., kand. fiz.-mat. nauk, red.; ROMANKOV, P.G., red.

[Handbook for the chemist] Spravochnik khimika, 2. izd., perer. i dop. Moskva, Khimiia. Vol.3. 1964. 1004 p. (MIRA 18:1)

1. Chlen-korrespondent AN SSSR (for Romankov). 2. Deystvitel'nyy chlen AN Ukr.SSR (for Yatsimirskiy).

TSYGODA, I.M.; KAZAKOV, V.N.; KOLESNIKOV, N.A.; BRYUKHANOV, N.G.; BURBA, A.A.; SADYKOV, V.I.; PIGAREV, A.D.; Prinimali uchastiye: PECHENKIN, S.N.; GLAZACHEV, G.M.; KHVESYUK, F.I.; KODINTSEV, A.V.; YERGALIYEV, E.Ye.; YERMAKOVA, Z.S.; NOVAK, I.V.; KHIL'KO, I.Ye.; LYASHEVSKIY, R.A.; PROKHOROV, A.I.; CHERTOVA, N.G.; URUBKO, V.N.; KUGUCHEV, V.V.

Industrial testing of a flow sheet for the processing of Altai complex metal ores along the lines of the flow sheet used at the Mednegorskii Combine. TSvet. met. 36 no.12:12-15 D '63. (MIRA 17:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy gorno-metallurgicheskiy institut tsvetnykh metallov (for Pechenkin, Glazachev, Khvesyuk, Kodintsev). 2. Irtyshskiy polimetallicheskiy kombinat (for Yergaliyev, Yermakova). 3. Mednogorskiy medno-sernyy kombinat (for Novak, Khil'ko, Lyashevskiy, Prokhorov, Chertova, Urubko, Kuguchev).

SHOYKHET, B.A.; ARAV, R.I.; TSYGONIY, L.D.; RUTKOVSKAYA, L.M.

Desulfation of Sivash brine during its complex treatment.
Ukr. khim. zhur. 29 no.2:214-219 '63. (MIRA 16:6)

1. Gosudarstvennyy institut prikladnoy khimii, Yevpatoriya.
(Sivash region—Brines) (Sulfates)

KHACHATUROV, A.S.; BAZHENOV, N.M. [deceased]; NAUMOVA, S.F.; TSYKALO, L.G.; YEROFEYEV, B.V.

Nuclear magnetic resonance spectra and structure of oligomers of 1,3-cyclohexadiene. Dokl. AN BSSR 7 no.7:459-463 Jl '63. (MIRA 16:10)

1. Institut fiziko-organicheskoy khimii AN BSSR i Institut vysokomolekulyarnykh soyedineniy AN SSSR.

YEROFEYEV, B.V.; NAUMOVA, S.F.; TSYKALO, L.G.; ZHAVNERKO, K.A.

Polymerization of 1,3-cyclohexadiene. Dokl.AN BSSR 3 no.3:95-99 Mr '59. (MIRA 12:8)

(Cyclohexadiene)

YEROFEYEV, B.V., akademik; NAUMOVA, S.F.; TSYKALO, L.G.

Chromatographic separation of 1,3-cyclohexadiene oligomers. Dokl. AN SSSR 163 no.4:884-886 Ag '65. (MIRA 18:8)

1. Institut fiziko-organicheskoy khimii AN BSSR. 2. AN BSSR (for Yerofeyev).

25265 S/190/61/003/007/009/021
B101/B220

15.9203

AUTHORS: Naumova, S. F., Tsykalo, L. G.

TITLE: Thermal polymerization of cyclohexadiene-1,3

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 3, no. 7, 1961, 1031-1033

TEXT: The aim of the present paper was to achieve a clarification of the widely varying publication data with regard to the polymerization of cyclohexadiene-1,3;(C_6H_8). The authors supposed that an impure initial C_6H_8 might be the reason for these different data. S. F. Naumova et al. has developed a new method for the production of pure C_8H_8 and the spectroscopic control of its purity (author's certificate no. 110964, 1958; Zh. obshch. khimii, 28, 1284, 1958). The results of the polymerization of this pure C_8H_8 are given in the present paper. Freshly distilled C_8H_8, boiling point 80.5°C, d_4^{20} = 0.8440; n_D^{20} = 1.4746; log ε = 4.00 for

Card 1/4

Thermal polymerization of ...

λ_{max} = 258 mμ, was dissolved in hexane and alcohol, filled into ampullae and liberated from air by freezing in vacuum. The sealed ampullae were heated in the thermostat at 100, 130, 155, and 200°C. The molecular weight of the polymers was determined cryoscopically in benzene. The data for a temperature of polymerization of 100-155°C are indicated in Table 1. The coefficient of polymerization amounted to 8-9 and was, thus, 4-4.5 times larger than that found by F. S. Shantorovich and I. A. Shlyapnikova (Vysokomol. soyed., 2, 1171, 1960). At 200°C, the polymerization was effected without initiator. The degree of conversion amounted already after 10 hr to 83% and increased to 88%, if the reaction lasted longer. The dimer determined after precipitation of the polymer by methanol and distillation of the solvent and monomer amounted to 33-50%, the liquid polymers having a higher molecular weight than the dimer, to 12-22%, the solid polymer to 17-33.5% of the total yield. If the reaction was continued for 40 hr, the proportion of dimer did not change. Thus, the dimer is not able to participate in the reaction. R.A. Kazanskiy and L. G. Vol'fson are mentioned. There are 2 tables and 7 references: 4 Soviet-bloc and 3 non-Soviet-bloc. The most important reference to

Card 2/4

Thermal polymerization of ...

English-language publication reads as follows: A.W. Crossley, J.Chem. Soc., 85, 1403, 1904.

ASSOCIATION: Institut fiziko-organicheskoy khimii AN BSSR (Institute of Physico-organic Chemistry, AS BSSR)

SUBMITTED: September 26, 1960

Card 3/4

TSYGIR, Ye.N.; FRIDRIKHSBERG, D.A.

The effect of foreign ("parasitic") ions on the process of ionophoresis [with summary in English]. Vest. LGU 12 no.16:103-116 '57. (MIRA 10:11)

(Electrophoresis)

TSYGODA, I.M.; PONOMAREV, V.D.

Volatility of zinc sulfide. Trudy Inst.met.i obog. AN Kazakh.SSR 11:175-184 '64. (MIRA 18:4)

TSYGODA, I.M.; KAZAKOV, V.N.; SEREGIN, Yu.I.; KORNEYEV, V.F.; Prinimali uchastiye: PECHENKIN, S.N.; GLAZACHEV, A.M.; TRAVIN, V.F.

Pilot plant testing of the sinter roasting of copper charges with a bottom blow. TSvet. met. 35 no.3:23-30 Mr '62. (MIRA 15:4)

(Sintering--Testing) (Copper ores)

BUZANOV, I.F., akademik, otv.red.; MEL'NIK, M.K., agronom, red.; OHLOV, I.P., agronom, red.; FEDOROV, A.I., doktor sel'skokhoz.nauk, red.; TSYGURA, K.D., agronom, red.; SERDYUK, B.M., red.; MANOYLO, Z.T., khud.-tekhn.red.

[Production of sugar beet seeds] Semenovodstvo sakharnoi svekly. Kiev, Izd-vo Ukrainskoi akad.sel'khoz.nauk, 1960. 271 p. (MIRA 14:1)

1. Kiyev. Vsesoyuznyy nauchno-issledovatel'skiy institut sakharnoy svekly.

(Sugar beets)

TSYGODA, I.M.

SMIRNOV, V.A.; TSYGODA, I.M.

Practice of feeding electric filters with one half-period current. (MLRA 10:1)
Trudy Alt.GMMII AN Kazakh.SSR 1:136-142 '54.
(Electric filters) (Copper--Metallurgy)

TSYGULEV, A.A.

YAKOVLEV, V.N., inzh.; PRIVALOV, N.N., inzh., retsenzent; TSYGULEV, A.A., red.; KARGANOV, V.G., red.graficheskikh materialov; UVAROVA, A.F., tekhn.red.

[Handbooks for mechanics and fitters] Spravochnik slesaria-montazhnika. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit. lit-ry, 1957. 548 p. (MIRA 11:1)

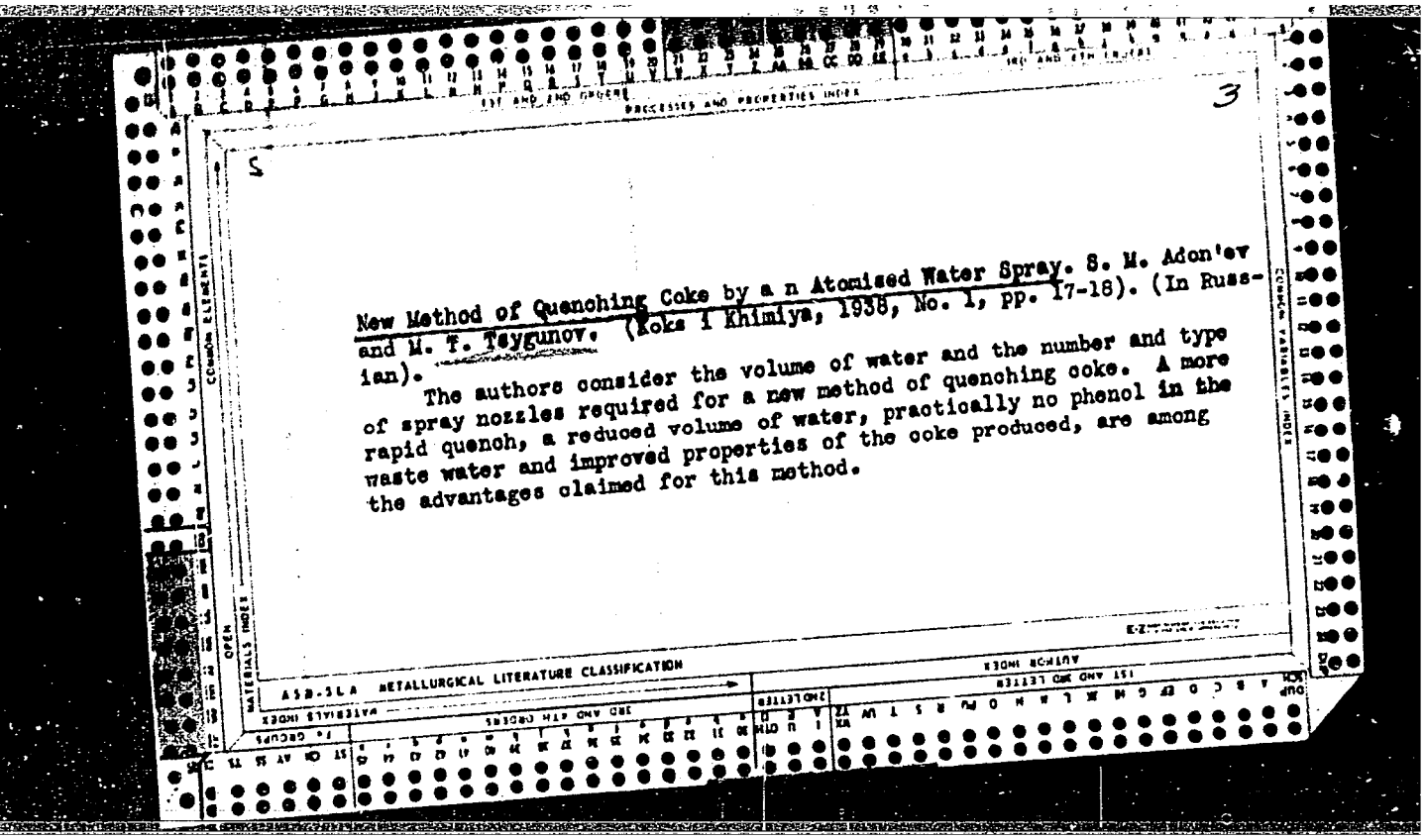
(Machinery--Erecting work)

TSVGULEV, A. A.

(How to identify enemy airplanes) Moskva, Voenizdat, 1942. 36 p.

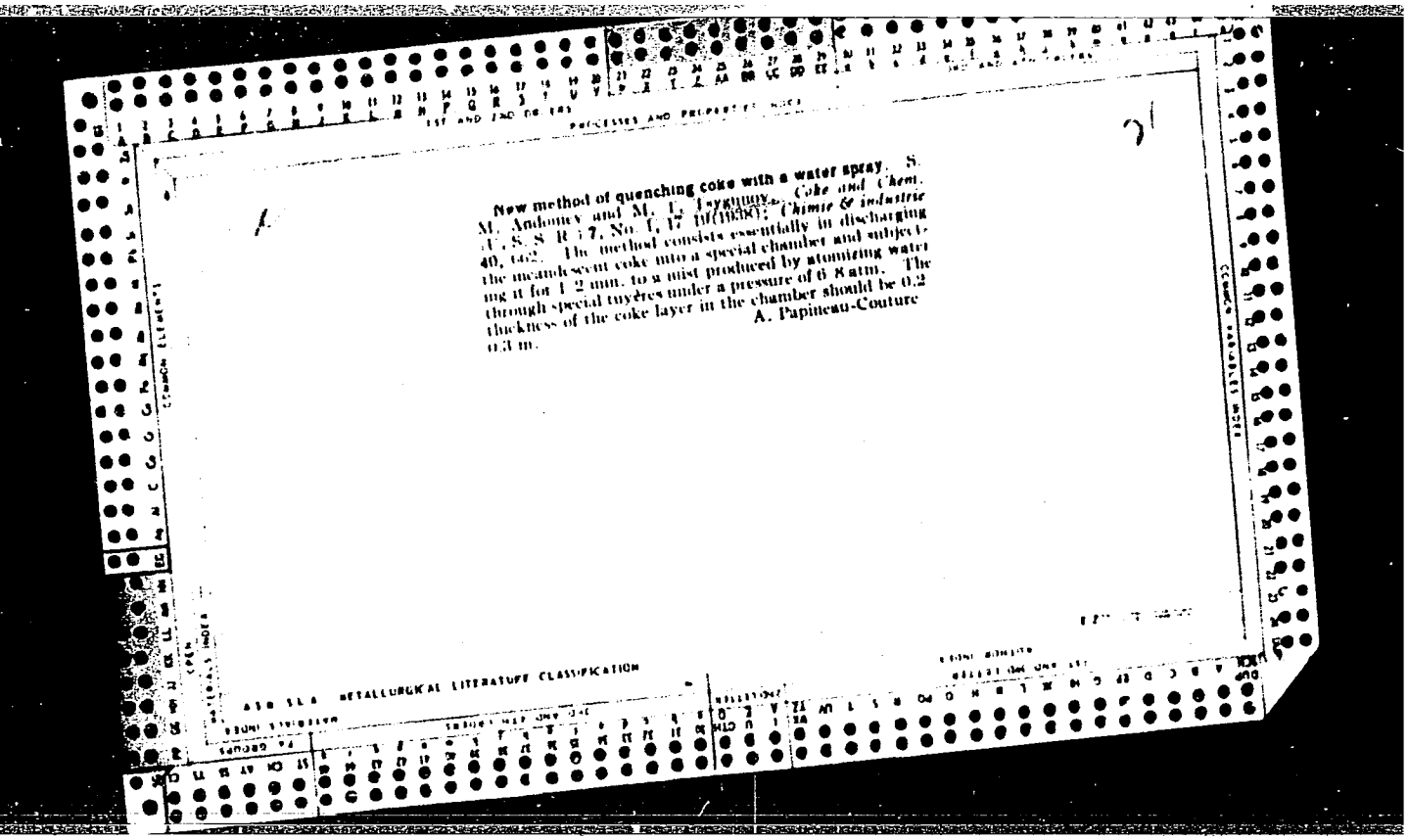
Cyr.4 TL20

1. Aeroplanes - Indentification marks.



New Method of Quenching Coke by a n Atomised Water Spray. S. M. Adon'ev and M. T. Teygunov. (Koks i Khimiya, 1938, No. 1, pp. 17-18). (In Russian).

The authors consider the volume of water and the number and type of spray nozzles required for a new method of quenching coke. A more rapid quench, a reduced volume of water, practically no phenol in the waste water and improved properties of the coke produced, are among the advantages claimed for this method.



New method of quenching coke with a water spray. S. M. Andonov and M. L. Lyagunov. *Coke and Chem. U.S.S.R.* 7, No. 7, 17 [1962]; *Chimie & industrie* 40, 662. The method consists essentially in discharging the incandescent coke into a special chamber and subjecting it for 1–2 min. to a mist produced by atomizing water through special tuyères under a pressure of 6–8 atm. The thickness of the coke layer in the chamber should be 0.2–0.3 m.

A. Papineau-Couture

ACC NR: AT7000962 SOURCE CODE: UR/0000/66/000/000/0120/0126

AUTHOR: Tsykalo, A. L.; Tabachnikov, A. G.

ORG: Odessa Institute of Naval Engineers (Odesskiy Institut Inzhenerov Morskogo Flota)

TITLE: Vapor pressures of liquid hydrogen peroxide and deuterium peroxide

SOURCE: AN UkrSSR. Teplofizicheskiye svoystva veshchestv (Thermophysical properties of materials). Kiev, Izd-vo Naukova dumka, 1966, 120-126

TOPIC TAGS: hydrogen peroxide, deuterium peroxide, vapor pressure, DEUTERIUM COMPOUND

ABSTRACT: The first half of the article briefly reviews the work previously done on the calculations of the vapor pressure of hydrogen peroxide. Calculations of the saturated vapor pressure of liquid H_2O_2 and liquid D_2O_2 in this work were made using a new method. In this method it is assumed that for polar substances, the molecules of which have an identical dipole moment, the universal relationship $\tau_s = \phi(\pi_s)$ holds, where τ_s is the reduced temperature and π_s is the reduced pressure. The verification of this assumption and the tabulation of $\tau_s = \phi(\pi_s, \mu)$ was carried out on the basis of the analysis of the vapor pressure curves for 26 polar substances. The generalization

Card 1/2

ACC NR: AT7000962

of the vapor pressure curves for H_2O_2, obtained by the Chebyshev approximation, has the form

$$\lg \pi = -\frac{4,432737}{\tau} + 7,636328 - 5,287567\tau + 2,083976\tau^2.$$

Since the dipole moments of H_2O_2 and D_2O_2 are approximately the same, the above generalized equation was also used for the representation of the saturated vapor pressure curve for D_2O_2. The article gives the comparison tables for the experimentally measured values of the saturated vapor pressures of H_2O_2 and D_2O_2 with those calculated by the previously proposed and the newly derived equations. Orig. art. has: 3 tables.

SUB CODE: 07/ SUBM DATE: 04Mar65/ ORIG REF: 002/ OTH REF: 014

Card 2/2

YEROFEYEV, B.V.; NAUMOVA, S.F.; TSYKALO, L.G.

Production of benzene by thermal polarization of 1,3-cyclohexadiene. (MIRA 15:6)
Dokl. AN BSSR 6 no.5:313-315 My '62.

1. Institut fiziko-organicheskoy khimii AN BSSR.
(Cyclohexadiene)
(Benzene)

NAUMOVA, S.F.; TSYKALO, L.G.; DUDINA, G.S.

Kinetics of the thermal polymerization of cyclohexadiene-1,3 at 130° to 160°C. Dokl. AN BSSR 7 no.2:99-102 F '63. (MIRA 16:7)

1. Institut fiziko-organicheskoy khimii AN BSSR. Predstavleno akademikom AN BSSR B.V. Yerofeyevym.
(Polymerization) (Cyclohexadiene)

S/020/62/147/001/016/022
B106/B101

AUTHORS: Yerofeyev, B. V., Academician AS BSSR, Naumova, S. F., Tsykalo, L. G.

TITLE: Products containing an odd number of monomer links, which form on the thermal polymerization of cyclohexadiene-1,3

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 147, no. 1, 1962, 106-107

TEXT: Monomer products contained in the crude polymerizate were spectrophotometrically studied in order to clarify the mechanism which underlies thermal polymerization of 1,3-cyclohexadiene. The content of a trimer product in the liquid portion of the polymerizate was determined. The monomer products contained 16.1 ± 3.9% benzene after an 8-hour polymerization at 180°C, and 21.8 ± 5.1% benzene after 10 hrs. After 2, 10, and 40 hrs polymerization at 200°C, the monomer products contained 47.1, 40.4, and 23.5% benzene respectively. At polymerization temperatures of 140, 150, and 160°C no benzene resulted. The molecular weight of the liquid part of the polymer, separated by methanol, was determined cryoscopically in order to calculate the amount of trimer in the polymerizate. The resulting values (160-240) indicate that the liquid part of the polymer

Card 1/3

Products containing an odd ...

contained only dimer and trimer. The trimer percentage α changes between 0.6% (10-hr polymerization at 140°C) and 11.1% (70-hr polymerization at 160°C). The results show that active monomer radicals form on thermal polymerization of 1,3-cyclohexadiene, which either add to a dimer so as to produce a trimer, or else disproportionate into benzene. The first stages of polymerization are:

$$C_6H_8 + C_6H_8 \longrightarrow C_6H_7^{\cdot} - C_6H_9^{\cdot} \quad (1)$$

$$C_6H_7^{\cdot} \text{ (or } C_6H_9^{\cdot}) + C_6H_8 \longrightarrow C_6H_7 \cdot C_6H_8^{\cdot} \text{ (or } C_6H_9 \cdot C_6H_8^{\cdot}) \quad (2) \text{ etc.}$$

Disproportionation may occur simultaneously with reaction 2:

$$C_6H_7^{\cdot} + C_6H_8 \longrightarrow C_6H_6 + C_6H_9^{\cdot} \quad (3)$$

$$C_6H_7^{\cdot} + C_6H_9^{\cdot} \longrightarrow C_6H_6 + C_6H_{10} \quad (4).$$

The polymerization mechanism assumed by P. S. Shantorovich and I. A. Shlyapnikova (Vysokomolek. soyed., 4, 1369 (1961)) which first yields dimer biradicals recombining into the polymer, is therefore impossible. There

S/020/62/147/001/016/022
B106/B101

Products containing an odd ...

is 1 table.

ASSOCIATION: Institut fiziko-organicheskoy khimii Akademii nauk BSSR (Institute of Organic Physical Chemistry of the Academy of Sciences BSSR)

SUBMITTED: June 4, 1962

Card 3/3

YEROFEYEV, B.V.; NAUMOVA, S.F.; KULEVSKAYA, I.V.; MARDYKIN, V.P.; TSYKALO, L.G.

Polymerization of ethylene in the presence of the complex of triethyl aluminum with titanium tectachloride. Vysokom.soed. 3 no.11:1705-1707 N '61. (MIRA 14:11)

1. Institut fizikoorganicheskoy khimii AN BSSR.
(Ethylene)
(Aluminum compounds)
(Titanium chloride)

S/250/63/007/002/006/008
A059/A126

AUTHORS: Naumova, S. F., Tsykalo, L. G., Dudina, G. S.

TITLE: The kinetics of thermal polymerization of cyclohexadiene-1,3 at 130 to 160°C

PERIODICAL: Doklady Akademii nauk BSSR, v. 7, no. 2, 1963, 99 - 102

TEXT: The separate amounts of dimers, trimers, and higher polymers formed in the course of thermal polymerization of cyclohexadiene at 130 to 160°C, and during thermal polymerization in benzene and cyclohexadiene at 160°C for 50 hours have been determined. The experimental methods used have been described before (Sb. nauchnykh rabot IFOKh AN BSSR (Collection of Scientific Papers of the IFOKh, AS BSSR), v. 9, 1961, p. 71). The molecular weights of the solid polymer decrease with increasing temperature and depend only little on the time of reaction. The portion of the dimer (6) at constant temperature is independent of the initial concentration of cyclohexadiene-1,3 which shows that the intermediate product forming in one of the first stages of the reaction undergoes monomolecular reaction with the probability ratio of conversion of this intermediate to yield the

The kinetics of thermal polymerization of...

dimer or a higher polymer remaining constant. One of the stages of the reaction should be therefore

$$C_{12}H_{16}^{*} \nearrow C_{12}H_{16}$$
$$\searrow C_{12}H_{16}^{**}$$

where $C_{12}H_{16}^{*}$ is the active dimer intermediate, $C_{12}H_{16}$ the inactive dimer (extracted product), and $C_{12}H_{16}^{**}$ the new active intermediate capable of adding a new monomer molecule. The most satisfactory results were obtained with the formulas:

$$\alpha_{dimer} = KC_o^{1/2} \quad (1)$$

or

$$[a]_{dimer} = KC_o^{3/2} \quad (2)$$

where α is the portion of dimerized cyclohexadiene-1,3, and [a] the dimer concentration obtained after 50 hours of polymerization. Hence, no monomer products (including benzene) are formed in the thermal polymerization of cyclohexadiene-1,3 at temperatures of up to 160°C following formula (2) which cannot be derived from the previously assumed polymerization mechanisms of this substance.

Card 2/3

PRESENTED: by B. V. Yerofeyev, Academician of the AS BSSR

SUBMITTED: June 26, 1962

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310017-9

Card 3/3

YEROFEYEV, B.V., akademik; NAUMOVA, S.F.; TSYKALO, L.G.

Products with an odd number of monomeric links formed in the thermal polymerization of 1,3-cyclohexadiene. Dokl. AN SSSR 147 no.1:106-107 N '62. (MIRA 15:11)

1. Institut fiziko-organicheskoy khimii AN Belorusskoy SSR. 2. AN Belorusskoy SSR (for Yerofeyev).
(Cyclohexadiene) (Polymerization)

NAUMOVA, S.F.; TSYKALO, L.G.

Thermal polymerization of 1, 3-cyclohexadiene. Vysokom.soed. 3 no.7:1031-1033 Jl '61. (MIRA 14:6)

1. Institut fiziko-organicheskoy khimii AN BSSR.
(Cyclohexadiene)

S/190/61/003/011/012/016
B110/B101

AUTHORS: Yerofeyev, B. V., Naumova, S. F., Kulevskaya, I. V., Mardykin V. P., Tsykalo, L. G.

TITLE: Polymerization of ethylene in the presence of the triethyl aluminum anisolate and titanium tetrachloride complex

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 3, no. 11, 1961, 1705 - 1707

TEXT: Initiators from triethyl aluminum anisolate (A) and $TiCl_4$ (T) for ethylene polymerization have low self-inflammability. The authors studied the properties of polyethylene (PE) produced with them, and the effect of the A:T ratio on its properties. The $Al(C_2H_5)_3 \cdot CH_3OC_6H_5$ was prepared by reaction of bromo ethyl with Mg-Al alloys (40% Al; 60% Mg in anisole). 1.0 mole/liter of A (boiling point 97 - 105°C/4-5 mm Hg) was dissolved in n-heptane. The $TiCl_4$ concentration in n-heptane was 0.4 moles/liter. Ethylene was pressed into the reaction vessel at 12 liters/hr. At first n-heptane, after this $TiCl_4$ in n-heptane, and then, during 1 min, A in

Card 1/3

Polymerization of ethylene in the...

n-heptane were added. After 20 min, PE was precipitated by means of CH_3OH with 3% HCl. The tabulated values were found under atmospheric pressure at 30°C. The density determined in water-alcohol mixture was 0.95 - 0.97. With increasing A:T ratio and constant T, the molecular weight of PE drops. Then, the amount of A determines the number of resulting polymer macromolecule chains. The A:T ratio was < 1 in tests 1 - 5, and 1.6 in test 6. While PE obtained by means of triisobutyl aluminum and $TiCl_4$ (Ref. 5. see below) had molecular weights of 67,000 - 940,000 and melting temperatures of 116 - 139°C, the molecular weights of the authors' PE were 91,000 - 316,000, the melting temperatures 127 - 130°C. The decrease of the molecular weight with decreasing Al-compound: $TiCl_4$ ratio observed in triisobutyl aluminum polymerization is probably due to the high excess of the former. Thus, the $TiCl_4$ amount determines the number of resulting polymer chains. There are 1 table and 5 non-Soviet references. The two references to English-language publications read as follows: Ref. 2: A. Grosse, J. Mavity, J. Org. Chem., 5, 106, 1940; Ref. 5: E. Badin J. Amer. Chem. Soc. 80, 6545, 1958.

Card 2/3

S/190/61/003/011/012/016
B110/B101

Polymerization of ethylene in the...

ASSOCIATION: Institut fizikoorganicheskoy khimii AN BSSR (Institute of Physical and Organic Chemistry AS BSSR)

SUBMITTED: December 26, 1960

Table. Ethylene polymerization.
Legend: (;) test no.; (2) amount of initiator components; (3) millimoles; (4) polyethylene yield, g; (5) molecular weight; (6) melting point, °C.

Table

① Опыт. №	② Количество компонентов инициатора			④ Выход полиэтилена, г	⑤ Молекулярный вес	⑥ Т. пл., °С
	③ А, ммоли	⑤ Т, ммоли	А/Т			
1	1,23	6,0	0,21	1,37	316 000	128
2	2,47	6,0	0,41	1,08	250 000	130
3	3,70	6,0	0,62	2,60	180 000	127
4	3,51	5,0	0,70	2,34	—	—
5	4,05	6,0	0,82	2,89	91 000	130
6	6,57	4,0	1,64	2,52	91 000	130

Card 3/3

S/786/61/000/009/003/006
I065/I242

AUTHORS: B.V.Yerofeyev, S.F.Naumova, L.G.Tsykalo

TITLE: The mechanism of thermal polymerization of 1,3-cyclohexadiene

SOURCE: Akademiya nauk Belorusskoy SSR. Institut fiziko-organicheskoy khimii. Sbornik nauchnykh rabot. no.9.1961. Monomery, svoystva i protsessy polucheniya polimerov, 71-79

TEXT: The thermal polymerization of 1,3-cyclohexadiene with the simultaneous formation of the dimer (1,4-ethylene-1,4,5,6,9,10--hexahydronaphtalene) and polymeric materials of unknown molecular weights has been studied by Hoffmann and Damm (Mitteilung Schlesisch.Kohlenforschunginstitut, 2, 97-146 (1925); Chem.Zentr., 1, 2342-2344 (1926); Chem.Abstr. 22, 1249 (1928)). The purpose of this work was to study the mechanism of this polymerization. 1,3-cyclohexadiene was prepared from cyclohexene hydroperoxide. The monomer was placed in ampules, connected to the vacuum system,

Card 1/3

degassed and sealed off under vacuum. The sealed ampules were placed in baths thermostated at between 80 and 200°C. The polymer was precipitated by the addition of four volumes of methanol. The precipitate was dissolved in benzene, reprecipitated with methanol and dried to constant weight in vacuo. The dimeric material was isolated after the first precipitation by vacuum distillation of the solvent and monomer. The quantity of trimer formed was evaluated by difference. Polymerization runs were carried out at 200, 180, 160, 130, 100 and 80°C. The dimer and trimer are probably incapable of propagating the polymerization reaction. The pure dimer did not undergo thermal polymerization. The rate of polymerization increased with rise in temperature, but the molecular weights of the polymers formed were practically identical. Longer polymerization times did not change the concentrations of dimer, trimer and polymer formed. The formation of the dimer is thus a parallel reaction and not an intermediate stage in the polymerization. The first stage of polymerization is the formation of an activated dimer molecule which can react in three possible ways (a) it can

S/786/61/000/009/003/006
I065/I242

The mechanism of thermal polymerization...

undergo inactivation, giving an inactive dimer as final product, (b) it can react with a monomer to yield benzene and cyclohexane through disproportionation, or (c) it can form an active trimer molecule which can either form a "dead" trimer through inactivation or combine with a monomer and form an active tetramer which will propagate the polymerization with the formation of high polymeric material. There are 5 figures and 2 tables.

Card 3/3

S/786/61/000/009/001/006
I065/I242

AUTHORS: B.V.Yerofeyev, S.F.Naumova, V.P.Markykin, I.V.Kulevskaya, L.G.Tsykalo

TITLE: The dependence of the molecular weight of polyethylene on the $TiCl_4/Al(iso\text{-}C_4H_9)_3$ ratio in the Ziegler catalyst

SOURCE: Akademiya nauk Belorusskoy SSR. Institut fiziko-organicheskoy khimii. Sbornik nauchnykh rabot. no.9. 1961. Monomery, svoystva i protsessy polucheniya polimerov. 59-62

TEXT: In the polymerization of ethylene initiated by a Ziegler catalyst with excess $TiCl_4$, the molecular weight of the polyethylene obtained increases with decrease of the $[AlR_3]/[TiCl_4]$ ratio. These findings disagree with the data of Badin (J.Am.Chem.Soc. 80, 6545, 1958). The polymerizations were carried out in a glass vessel equipped with mechanical stirrer, reflux condenser, gas inlet tube and a burette for the introduction of the dissolved catalyst components. Molecular weights were determined viscometrically

Card 1/3

(in decaline, at 135°C). The interpretation of the experimental results is based on the assumption of a very high value for the stability constant (K) of the complex

$$TiCl_4 + AlR_3 \rightleftharpoons TiCl_4 \cdot AlR_3$$

so that

$$K \gg \frac{1}{[TiCl_4]_o + [AlR_3]_o}$$

where the subscript o denotes initial concentrations. Then the concentration (X) of the $TiCl_4 \cdot AlR_3$ complex can be represented by the approximate expressions

$$[X]' \approx [TiCl_4]_o \quad \text{for} \quad [TiCl_4]_o < [AlR_3]_o$$

$$[X]'' \approx [AlR_3]_o \quad \text{for} \quad [AlR_3]_o < [TiCl_4] \ ,$$

the component at the lower concentration being the limiting parameter. Since the degree of polymerization is inversely proportional to the catalyst concentration ($\overline{DP} \sim [X]^{-1}$), the molecular

The dependence of the molecular ... S/786/61/000/009/001/006
I065/I242

weight of polyethylene will increase on decreasing the $[AlR_3]/[TiCl_4]$ ratio when $[AlR_3]_o < [TiCl_4]_o$, or on increasing the $[AlR_3]/[TiCl_4]$ ratio when $[AlR_3]_o > [TiCl_4]_o$. There are 3 tables.

Card 3/3

KULAKOV, V.I.; POLYANSKIY, A.V.; SUSHKOV, A.I.; TSYKALO, S.B.

Quality of flat commercial aluminum ingots cast from molten electrolytic baths. Alium. splavy no.3:390-396 '64. (MIRA 17:6)

TSYKALOV, T.

More on the regeneration of oils. Neftianik 3 no.6:28 Je '58.
(MIRA 11:9)

1. Nachal'nik proyektno-smetnogo byuro Kazakhstanneftesbyta.
(Oil reclamation)

SOV/92-58-6-24/30

AUTHOR: Tsykalov, T.

TITLE: More on the Subject of Reclaiming Lubricating Oil (Yeshche raz o regeneratsii masel)

PERIODICAL: Neftyanik, 1958, Nr 6, p 28 (USSR)

ABSTRACT: The author agrees with the opinion expressed in the article "Lube Oil Reclaiming is an Important Problem of the Soviet National Economy" published in the Nr 9, 1957 issue of Neftyanik, and he believes that it is unwise to erect oil reclaiming units of the "Sel'khoz" 50 ton capacity type in bulk plants. The author suggests that oil reclaiming units be erected with an annual capacity ranging from 100 tons to 700 tons at existing bulk plants, and at bulk plants now in the process of construction. However, the standard type of such units has not yet been developed. Moreover, the problem of collecting the spent oil should be studied because consumers often mix different types of spent oil and deliver the mixed oil to bulk plants, which are unable to produce reclaimed oil with desirable properties from such a mixture. In the article referred to by the author the suggestion was made to build oil reclaiming units in groups which would be in a position to service several bulk plants or terminals. The author does not support this proposal and wonders if the oil reclaiming process should

Card 1/2

be entrusted exclusively to refineries. In his opinion, bulk plants should only take care of collecting the spent oil which is still reclaimable. Therefore, the proposed plan of erecting oil reclaiming units at each bulk plant should be revised and examined once more.

FEYNBERG, S. M., VOROBYEV, E. D., GRYASEV, V. M., KLIMENTOV, V. B., LYASHCHENKO, N. Ya., TSIKANOV, V. A.

" Uranium-Water Intermediate Reactor USed for Obtaining High-Intensity Neutron Fluxes."

paper to be presented at 2nd UN Intl. Conf. on the peaceful uses of Atomic Energy, Geneva, 1 - 13 Sept 58.

Tsykanov, V.A.

21(4) PHASE I BOOK EXPLOITATION SOV/2583

International Conference on the Peaceful Uses of Atomic Engergy. 2nd, Geneva, 1958.

Doklady sovetskikh uchenykh; yadernyye reaktory i yadernaya energetika. (Reports of Soviet Scientists; Nuclear Reactors and Nuclear Power) Moscow, Atomizdat, 1959. 707 p. (Series: Its: Trudy, vol. 2) Errata slip inserted. 8,000 copies printed.

General Eds.: N.A. Dollezhal, Corresponding Member, USSR Academy of Sciences, A.K. Krasin, Doctor of Physical and Mathematical Sciences, A.I. Leypunskiy, Member, Ukrainian SSR Academy of Sciences, I.I. Novikov, Corresponding Member, USSR Academy of Sciences, and V.S. Fursov, Doctor of Physical and Mathematical Sciences; Ed.: A.P. Alyab'yev; Tech. Ed.: Ye. I. Mazel'.

PURPOSE: This book is intended for scientists and engineers engaged in reactor designing, as well as for professors and students of higher technical schools where reactor design is taught.

COVERAGE: This is the second volume of a six-volume collection on the peaceful use of atomic energy. The six volumes contain the reports presented by Soviet scientists at the Second International Conference on Peaceful Uses of Atomic Energy, held from September 1 to 13, 1958 in Geneva. Volume 2 consists of three parts. The first is devoted to atomic power plants under construction in the Soviet Union; the second to experimental and research reactors, the experiments carried out on them, and the work to improve them; and the third, which is predominantly theoretical, to problems of nuclear reactor physics and construction engineering. Yu. I. Koryakin is the science editor of this volume. See SOV/2081 for titles of all volumes of the set. References appear at the end of the articles.

199

21.1910

S/089/60/008/06/01/021
B006/B063 S2302

AUTHORS: Feynberg, S. M., Konobeyevskiy, S. T., Dollezhal', N. A., Yemel'yanov, I. Ya., Tsykanov, V. A., Bulkin, Yu. M., Zhirnov, A. D., Filippov, A. G., Shchipakin, [illegible], Perfil'yev, V. P., Samoylov, A. G., Ageyenkov, [illegible]

TITLE: The CM(SM) Research Reactor With a Capacity of 50 Mw 19

PERIODICAL: Atomnaya energiya, 1960, Vol. 8, No. 6, pp. 493-504

TEXT: The present article gives a detailed description of the Russian 50-Mw research reactor which has a neutron flux of $2.2 \cdot 10^{15}$ n/cm^{2}sec. It is used both for research work in nuclear physics and reactor engineering; obtaining of new transuranic elements, testing of fission and building materials under neutron and gamma bombardment, within the temperature range 20°K - 2000°C, and in various media; spectrometric examination of intermediate neutrons; examination of the gamma spectrum of the (n,γ) reaction; examination of short-lived isotopes and neutron diffraction analyses. The authors first discuss some characteristic data.

Card 1/5

The water-cooled, reflected reactor works with U^{235} enriched to 90%. The critical mass (without the experimental holes) is 7.3 kg of U^{235}, and including the experimental holes, it amounts to 9.5 kg (loading: ~11.7 kg). The maximum heat flow from the fuel element attains $5.5 \cdot 10^6$ kcal/m^2.h; the surface temperature does not exceed 195°C. Fig. 1 shows the distribution of the neutron flux in the cross section of the reactor; the flux has two maxima, one in the center of the cooling-water cavity ($2.2 \cdot 10^{15}$), and the other in the lateral reflector ($5 \cdot 10^{14}$n/cm^{2}sec). The flux/power ratio is $4.4 \cdot 10^{10}$n/cm^2.sec.kw. With a 25% submersion depth of the fuel elements, the reactor can be in continuous operation for a period of 60-65 days. Several details are dealt with next. Experimental holes: The reactor has five horizontal and fifteen vertical holes. The horizontal ones are in the central part of the active zone, whose longitudinal and cross sections are shown in Figs. 2,3. At the output of the holes the neutron flux amounts to ~$3 \cdot 10^{10}$n/cm^{2}sec. The vertical holes are located in the reflector with the exception of the central ones. Three of them serve for obtaining transuranic elements (one of these being in the center), two low-temperature holes serve for metal

Card 2/5

tests, two high-temperature holes for the testing of fuel elements, chemical analyses of the cooling water, and corrosion tests. All of these holes are water-cooled. Furthermore, five gas-cooled holes serve for testing fission and building materials in the range of 0 - 600°C; one hole (cooled with helium gas or liquid H_2) serves for material tests at low temperatures; one gas-cooled hole for material tests at ~2000°C; one hole cooled with liquid metal (1000°C) for testing fuel elements and coolants. Construction: The following demands were made on construction: creation of a small active zone that would withstand high thermal loads for a long time, and its cooling; application of a maximum number of experimental holes (their distribution is shown in Fig. 3); possible exchange of fuel assemblies without pressure drop. Figs. 2-5 illustrate particulars of the construction. Reactor body and cover: Fig. 2 is described. The cylindrical part is made of 36 mm thick stainless steel of the grade 1Х18Н9Т (1Kh18N9T). The reflector consists basically of beryllium oxide; it is made up of blocks comprising about 65 different types, which are enclosed by steel plates on top and at the bottom. Fuel element assemblies: The element itself has the shape of a plate with a

Card 3/5

core, pressed from uranium oxide powder and electrolytic nickel; the core is contained in a nickel can. Fig. 6 shows a section through the assembly, Fig. 7 another through a fuel element. Data of one such element are compiled; every element contains 12.5 g U^{235}. The cylindrical body shield (Fig. 2) divides the inner reactor cavity into two zones. The functions of this shield are briefly discussed, and the cooling water circulation is described next. The control system is described in greater detail. This system consists of two automatic regulators with two regulation rods each, four shim rods, and four safety rods which can also be used as shim rods. The automatic regulation is operated by 13 ionization chambers located outside the reactor body; it covers the power range from 0.5 to 100%. Several details concerning safety and shim rods are thoroughly discussed. Reactor shield: Fig. 8 shows a cross section through reactor plus shield. The latter consists of steel and heavy concrete. A few details are described, and the process of fuel extraction is briefly dealt with. The cooling system is finally discussed. It consists of four closed, separate loops. The water is kept flowing by circulating pumps (500 t/h, 10 atm); the heat exchange power is 15 Mw.

There are 8 figures and 1 [illegible]

SUBMITTED: March 15, 1960

S/089/63/014/003/014/020
B102/B186

AUTHOR: Tsykanov, V. A.

TITLE: Thermal stresses and deformations in a long bar with non-uniform internal heat release

PERIODICAL: Atomnaya energiya, v. 14, no. 3, 1963, 322 - 324

TEXT: Temperature field, thermal stress and deformation are calculated for a long rectangular homogeneous bar placed near a reactor core; the heat source density distribution inside the bar is assumed to be governed by $q(x) = q_0 e^{-\varkappa x}$ or $q(x) = q_0 + kx$. For both cases the well-known relations for deformation and thermal stress are used for calculating the temperature dependences of the deformation and stress components. The cross-sectional temperature field is determined by solving the equation $\Delta T(x,y) + q(x)/\lambda = 0$. In the case of $q(x) = q_0 + kx$, the solution reads

$$T(x, y)=\frac{q_0 a}{2\alpha}(2+\mathrm{Bi})-\frac{ka^2(3+\mathrm{Bi})}{6\lambda(1+\mathrm{Bi})}-\frac{q_0 x^2}{2\lambda}+\frac{kx^3}{6\lambda}-\frac{4q_0 a\,\mathrm{Bi}}{\alpha}\sum_n \frac{C_n}{\mu_n}\cos\left(\mu_n\frac{x}{a}\right)\mathrm{ch}\left(\mu_n\frac{y}{a}\right)-$$
$$-\frac{4ka^2}{\alpha}\sum_m C_m\left[\frac{\mathrm{Bi}-1}{3(\mathrm{Bi}+1)}+\frac{\mathrm{Bi}+1}{\mu_m^2}\right]\times\sin\left(\mu_m\frac{x}{a}\right)\mathrm{ch}\left(\mu_m\frac{y}{a}\right). \qquad (15)$$

Card 1/3

where

$$C_n=\frac{\sin\mu_n}{\left[\frac{\mu_n}{Bi}\,\mathrm{sh}\left(\mu_n\frac{b}{a}\right)+\mathrm{ch}\left(\mu_n\frac{b}{a}\right)\right][2\mu_n+\sin(2\mu_n)]}; \quad (16)$$

$$C_{n,1}=$$

$$=\frac{\cos\mu_{n1}}{\left[\frac{\mu_m}{Bi}\,\mathrm{sh}\left(\mu_m\frac{b}{a}\right)+\mathrm{ch}\left(\mu_m\frac{b}{a}\right)\right][2\mu_m+\sin(2\mu_m)]}. \quad (17)$$

Bi is the Biot number. The deformation on uniform elongation $\varepsilon_0=\beta\bar{T}(\overline{x,y})$ is given by

$$\varepsilon_0=\frac{q_0a\beta}{2\alpha}\left(2+\frac{2}{3}Bi-\frac{8a}{b}Bi\sum_n\frac{C_n^*}{\mu_n}\right); \quad (20)$$

$$C_x=\frac{1}{R_x}=\frac{12ka^3\beta}{ab}\sum_m C_m^*\left(\frac{Bi-1}{3(Bi+1)}+\frac{Bi+1}{\mu_m^2}\right)-$$

$$-\frac{ka^3\beta(6+Bi)}{15\lambda(1+Bi)}, \quad (21)$$

where

$$C_n^*=\frac{C_n}{\mu_n^2}\sin\mu_n\,\mathrm{sh}\left(\mu_n\frac{b}{a}\right); \quad (22)$$

$$C_m^*=\frac{C_m}{\mu_m^2}\,\mathrm{sh}\left(\mu_m\frac{b}{a}\right)\left(\cos\mu_m-\frac{\sin\mu_m}{\mu_m}\right). \quad (23).$$

Card 2/3

Thermal stresses and deformations ...

The stresses can be calculated from the relation $\sigma = E\varepsilon/(1-\nu)$, E is Young's modulus and ν Poisson's ratio; ab is the cross-section area of the bar, λ the heat conduction coefficient of its material, α the heat transfer coefficient from the bar to the surrounding medium, R_x a radius of curvature, μ_n and μ_m are tabulated functions ($\cot \mu_n = \mu_n/Bi$, $\cot \mu_m = -Bi/\mu_m$). $T(x,y)$ and ε_o are given also for the case of exponential heat source distribution.

SUBMITTED: February 15, 1962

Card 3/3

EPF(c)/EPF(n)-2/EWT(m)/BDS--AFFTC/ASD/AFWL/SSD--Pr-4/Pu-4--DM
L 11205-63
ACCESSION NR: AP3001177 S/0089/63/014/005/0469/0473 64

AUTHOR: Tsykanov, V. A.

TITLE: Determination of cost of irradiation in a research reactor 19

SOURCE: Atomnaya energiya, v. 14, no. 5, 1963, 469-473

TOPIC TAGS: irradiation cost of reactor

ABSTRACT: A method is suggested for estimating the cost of a given irradiation experiment. The total cost of operating the reactor is computed taking into consideration the life of the reactor, fuel, servicing, labor, etc. This is the cost of useful neutrons that can be utilized in an experiment; the rest of neutrons is spent on keeping the reactor going. In a multichannel reactor the efficiency of each channel may not be the same; this also must be considered in determination of cost. The effect of the specimen on the reactivity of the channel and the cooling time for the specimen also play a part. An example of the estimation of cost for a six-channel reactor is given. Orig. art. has: 12 equations.

ASSOCIATION: none

Card 1/1

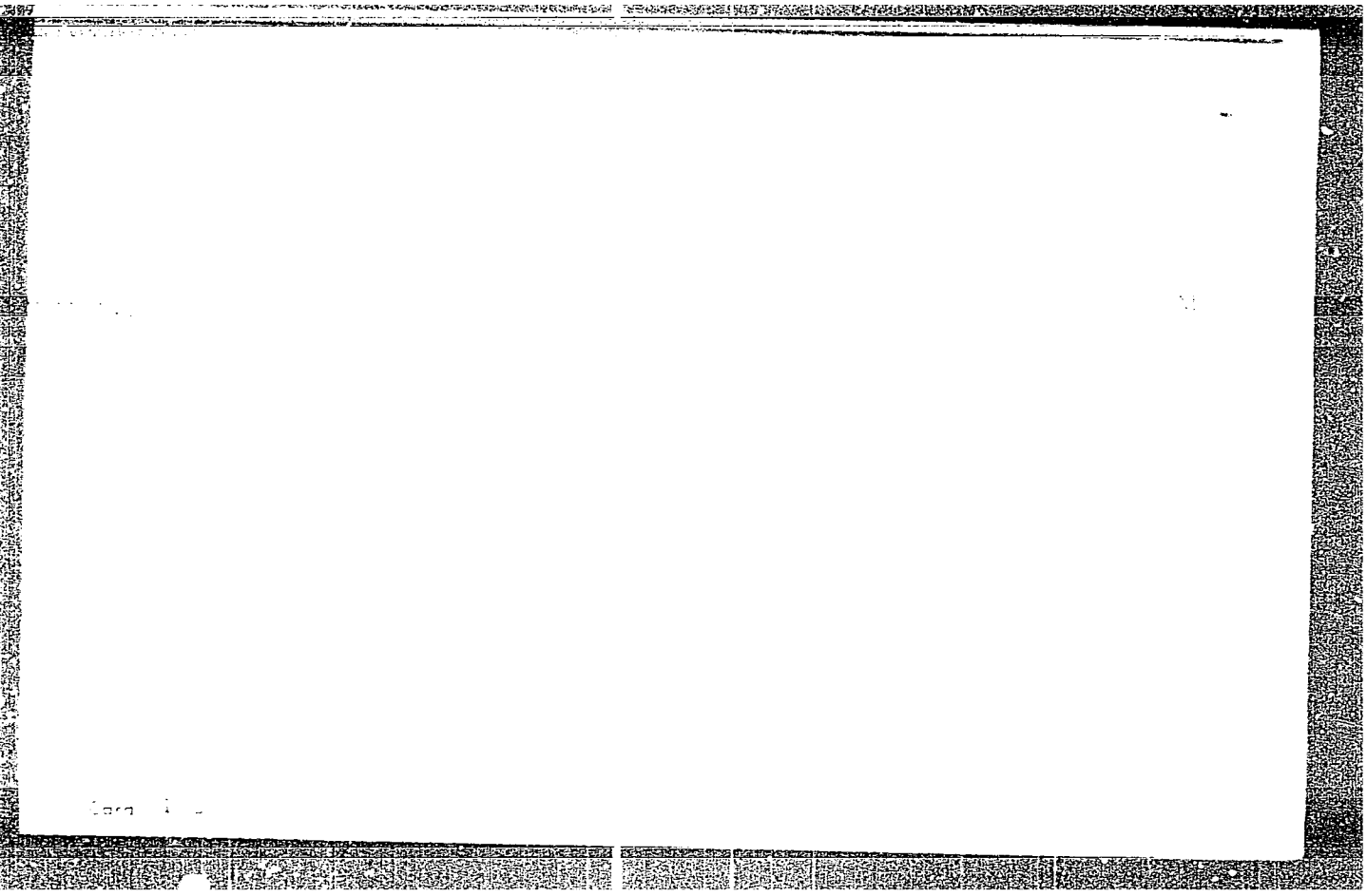
FEYNBERG, S. M.; TSYKANOV, V. A.; VOROBYEV, Ye. D.

"Reactor SM-2 with the Highest Available Neutron Flux."

report submitted for 2nd Intl Conf, Peaceful Uses of Atomic Energy, Geneva, 31 Aug-9 Sep 64.

FEYNB[illegible] S.M.; POLEZHAL', N.A.; VOROB'YEV, Ye.D.; TSYKANOV, V.A.; YEMEL'YANOV, I. Ya.; GRYAZEV, V.M.; KOCHENOV, A.S.; BULKIN, Yu.M.; AGEYENKOV, V.I.; AVER'YANOV, P.G.

Physical and operational characteristics of the SM-2 reactor. Atom. energ. 17 no.6:452 D '64 (MIRA 18:1)



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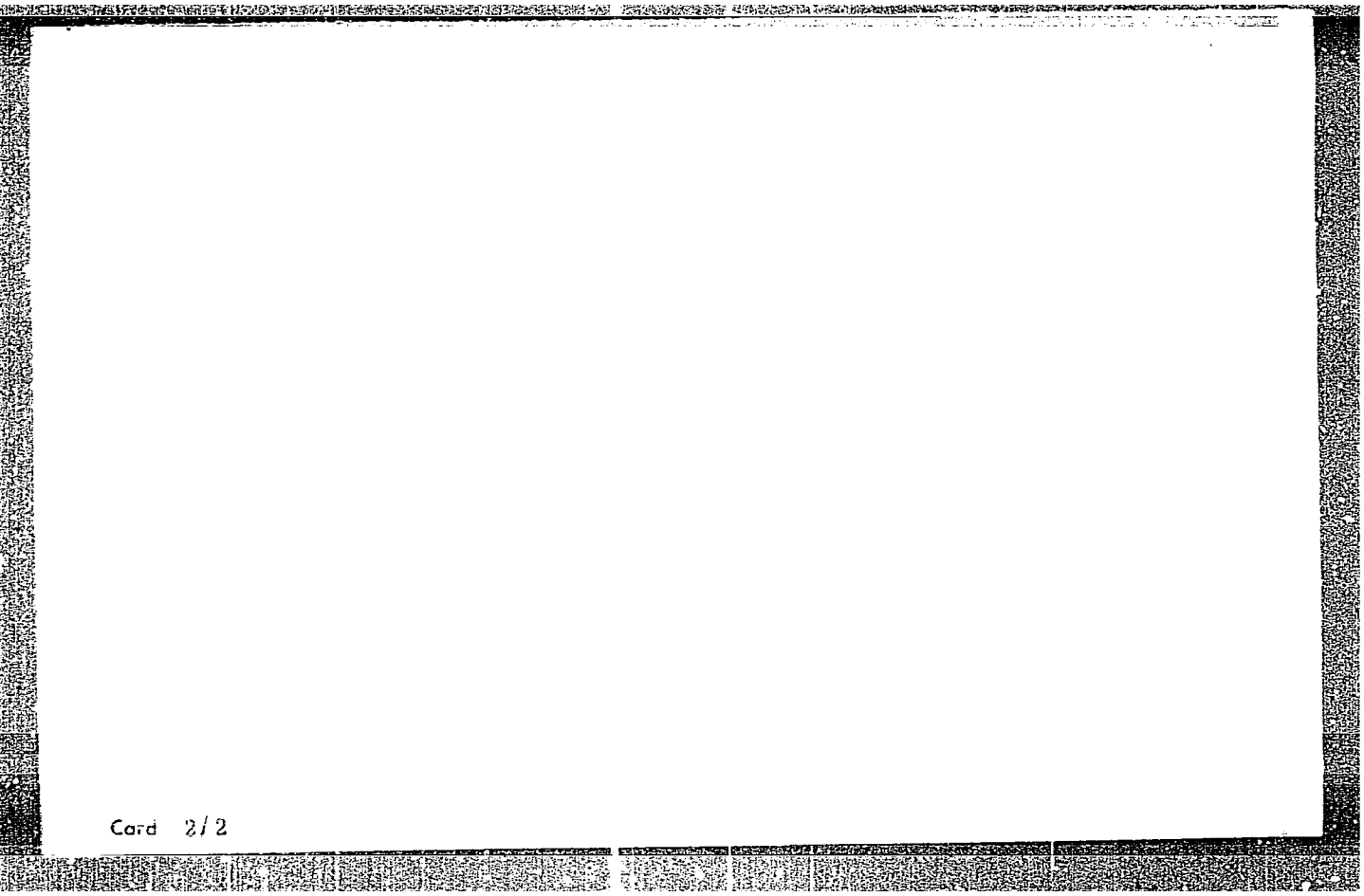


TSYKANOV, V.A.

Research reactors and atomic power plants in France. Atom. energ. 18 no.3:306-309 Mr '65. (MIRA 18:3)

MIKHAYLOVSKYY, V.N. [Mikhailovs'kyi, V.M.]; PERVUSHIN, V.N. [Pervushyn, V.M.]; TSYKHAN, A.I. [TSykhan, O.I.]

Acoustic methods of mine geophysical prospecting. Dop. AN URSR no.6:757-760 '63 (MIRA 17:7)

1. Institut mashinovedeniya i avtomatiki AN UkrSSR. 2. Chlen-korrespondent AN UkrSSR (for Mikhaylovskiy).

TSYKHAN, A.I., kand. tekhn. nauk; NIKOLAYCHIK, L.F.

Distinguishing reflected signals by intensive direct excitation in sonar detection systems of nonuniformities of rocks. Vop. pered. inform. 3:72-76 '64. (MIRA 18:1)

KRINBERG, I.A.; TSYKHANSKIY, V.D.

Spectrochemical determination of small amounts of niobium and tantalum in rocks. Zhur.anal.khim. 17 no.4:466-470 Jl '62. (MIRA 15:8)

1. Institute of Geochemistry, Academy of Sciences of the U.S.S.R., Siberian Department, Irkutsk.
(Niobium--Spectra) (Tantalum--Spectra)

ZNAMENSKIY, Ye.B.; KONUSOVA, V.V.; KRINBERG, I.A.; POPOLITOV, E.I.; FLEROVA, K.V.; TSYKHANSKIY, V.D.

Distribution of titanium, niobium, and tantalum in granitoids containing sphenes. Geokhimiia no.9:800-805 '62. (MIRA 15:11)

1. Institute of Geochemistry, Siberian Branch of the Academy of U.S.S.R., Irkutsk.
(Geochemistry)

TSYKHANSKIY, Yu.L., inzh.

Work of the service personnel and engineering psychology.
Elek. sta. 36 no.1:56-58 Ja '65. (MIRA 18:3)

Tsukervanik, I. P.

Simkhayev, N. G. and Tsukervanik, I. P. "On the condensation of vinyl ethers with aromatic compounds", (from the Graduate dissertation of N. G. Simkhayev), Izvestiya Adad. nauk UzSSR, 1948, No. 4, p. 29-41, (Resume in Uzbek), Bibliog: 18 items.

SO: U-3042, 11 March 53, (Letopis 'nykh Statey, No. 10, 1949).

MIKHAYLOVSKIY, V.N.; TSYKHAN, A.I.

Effect of static stresses on the propagation of elastic waves in metals. Avtom. kont. i izm. tekh. no.1:70-73 '57. (MIRA 11:6)
(Sound--Transmission)

AUTHOR: Tsykhan, A.I. (L'vov) SOV/24-58-9-21/31

TITLE: Utilization of Audio Signal Systems in Telemetry Equipment (O primenenii zvukovykh signal'nykh sistem v tele-izmeritel'nykh ustroystvakh)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Otdeleniye Tekhnicheskikh Nauk, 1958, Nr 9, pp 124 - 126 (USSR)

ABSTRACT: It is shown that certain parameters of oil boreholes can be transmitted to the surface during halts in the boring operation using audio signals transmitted through the drill tube or the drilling mud. Some data are given on the attenuation of longitudinal sound waves (at 50 to 1 200 cps) in the drill tube with a clay-base mud. The results with a steel wire are similar. Some data on the mud itself are mentioned but not fully presented. The noise spectrum data are said (not shown) to indicate an optimum frequency of 30 - 40 cps; depths as great as 3 000 m can be used under suitable conditions. There are 1 table and 3 Soviet references.

SUBMITTED: July 29, 1957

Card 1/1

MIKHAYLOVSKIY, V.N.; TSYKHAN, A.I.; SELASTEL'NIKOVA, E.A.

Designing a hydraulic turbotachometer. Avtom.kont. i izm.tekh. no.5:159-164 '61. (MIRA 14:11)
(Tachometer)

TSYKHAN, A.I.; PEKHN'O, M.I.

Self-packing valve of automatic devices operating in heavily contaminated fluids. Mash. i neft. obor. no.9:24-25 '63. (MIRA 17:2)

1. L'vovskiy institut mashinovedeniya i avtomatiki AN UkrSSR.

TSYKHAN, A.I. (L'vov)

Using sound signaling systems in telemetering units. Izv. AN SSSR. Otd. tekh.nauk no.9:124-126 S '58. (MIRA 11:10)
(Oil well logging, Electric) (Signals and signaling)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310017-9"

TSYKHAN, A. I.

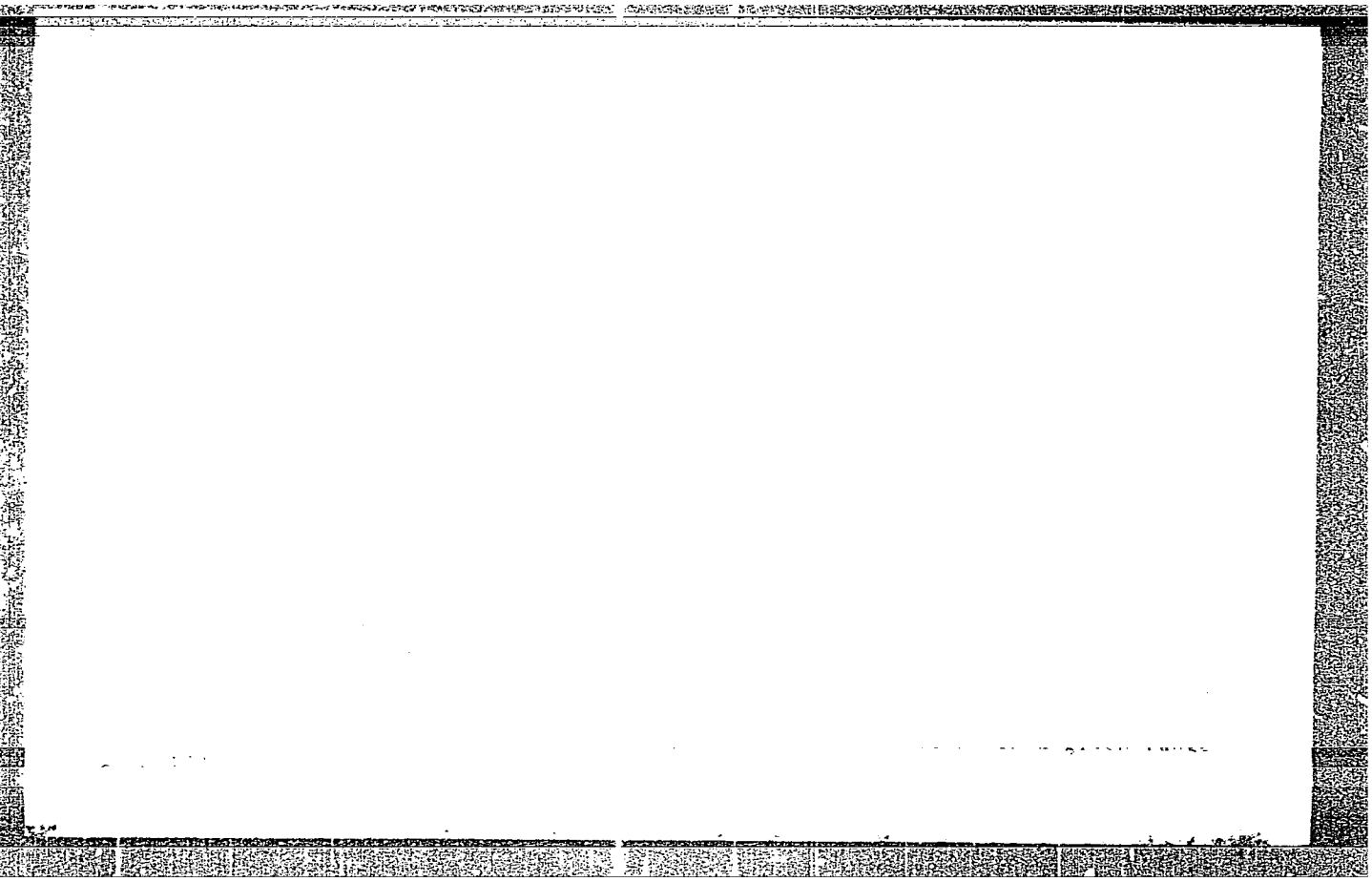
Tsykhan, A. I.

"Investigation of acoustic channels for depth measurements in oil wells." Min Higher Education Ukrainian SSR. L'vov Polytechnic Inst. L'vov, 1956. (Dissertation for the Degree of Candidate in Technical Sciences).

Knizhnaya letopis'
No. 25, 1956. Moscow

MIKHAYLOVSKIY, V.N.(L'vov); TSYKHAN A.I.(L'vov)

Effect of static tension on sound conductivity and speed in metals.
Izv.AN SSSR.Otd.tekh.nauk no.1:139-140 Ja '57. (MLRA 10:3)
(Sound waves) (Metals)



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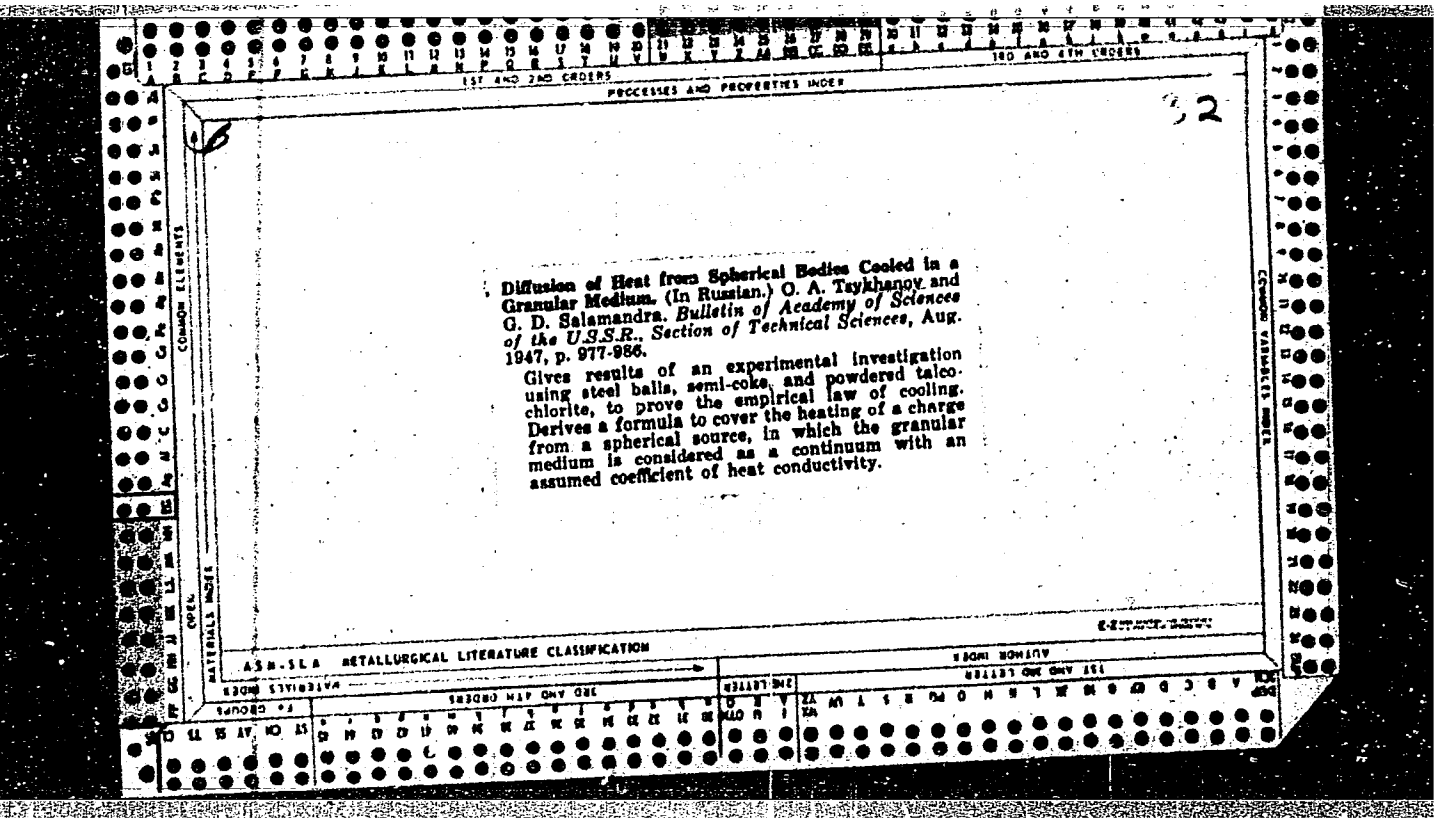
APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310017-9"

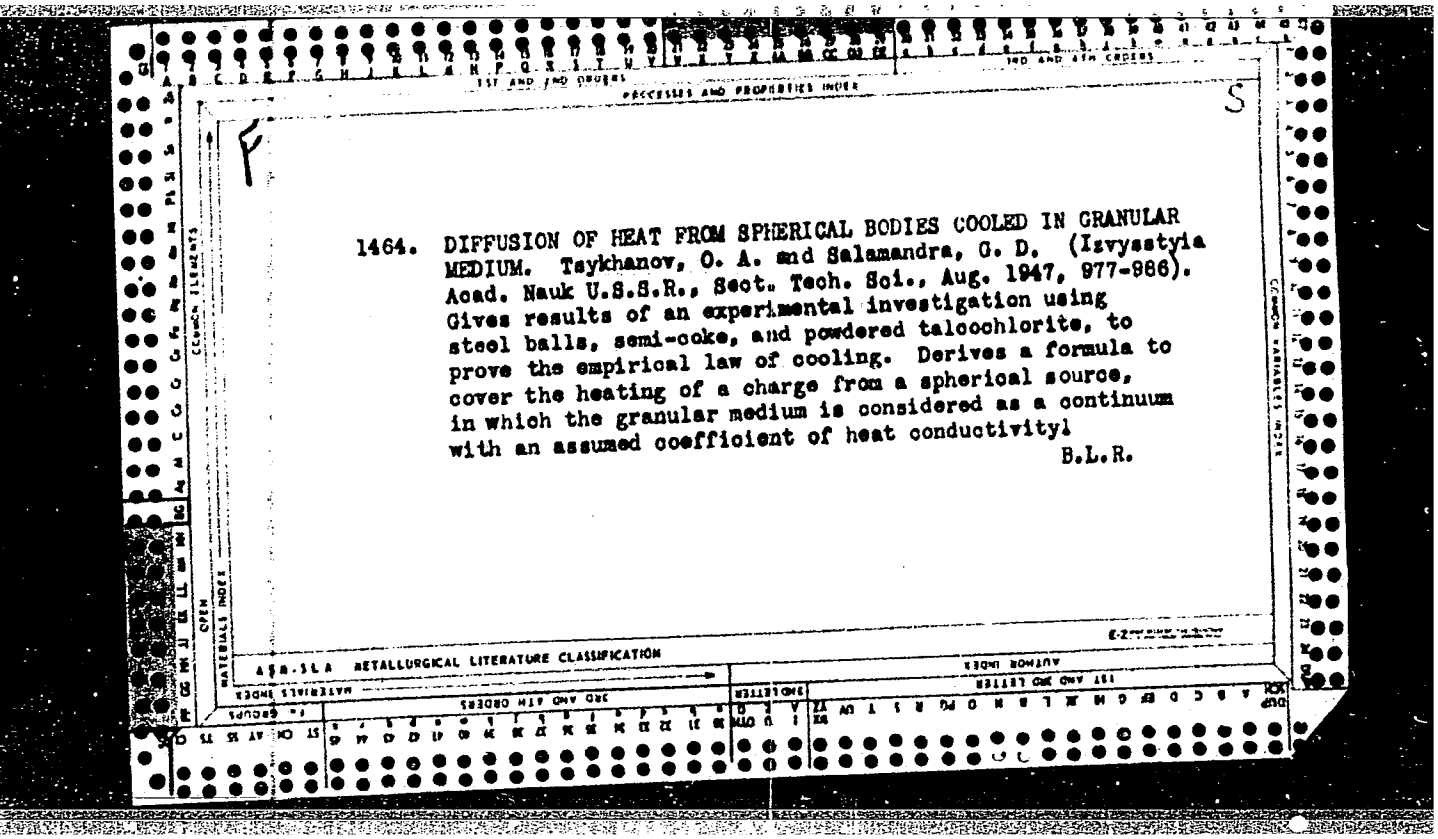
TSYKHAN, A.I.; PEKHN'O, M.I.

Shock-absorption requirements for bit rollers of small diameter in the drilling of solid rock. Neft. i gaz. prom. no.2:33 Ap-Je '64. (MIRA 17:9)



Diffusion of Heat from Spherical Bodies Cooled in a Granular Medium. (In Russian.) O. A. Tsykhanov and G. D. Salamandra. *Bulletin of Academy of Sciences of the U.S.S.R., Section of Technical Sciences*, Aug. 1947, p. 977-986.

Gives results of an experimental investigation using steel balls, semi-coke, and powdered talco-chlorite, to prove the empirical law of cooling. Derives a formula to cover the heating of a charge from a spherical source, in which the granular medium is considered as a continuum with an assumed coefficient of heat conductivity.



1464. DIFFUSION OF HEAT FROM SPHERICAL BODIES COOLED IN GRANULAR MEDIUM. Tsykhanov, O. A. and Salamandra, G. D. (Izvyestyia Acad. Nauk U.S.S.R., Sect. Tech. Sci., Aug. 1947, 977-986). Gives results of an experimental investigation using steel balls, semi-coke, and powdered talcochlorite, to prove the empirical law of cooling. Derives a formula to cover the heating of a charge from a spherical source, in which the granular medium is considered as a continuum with an assumed coefficient of heat conductivity.

B.L.R.

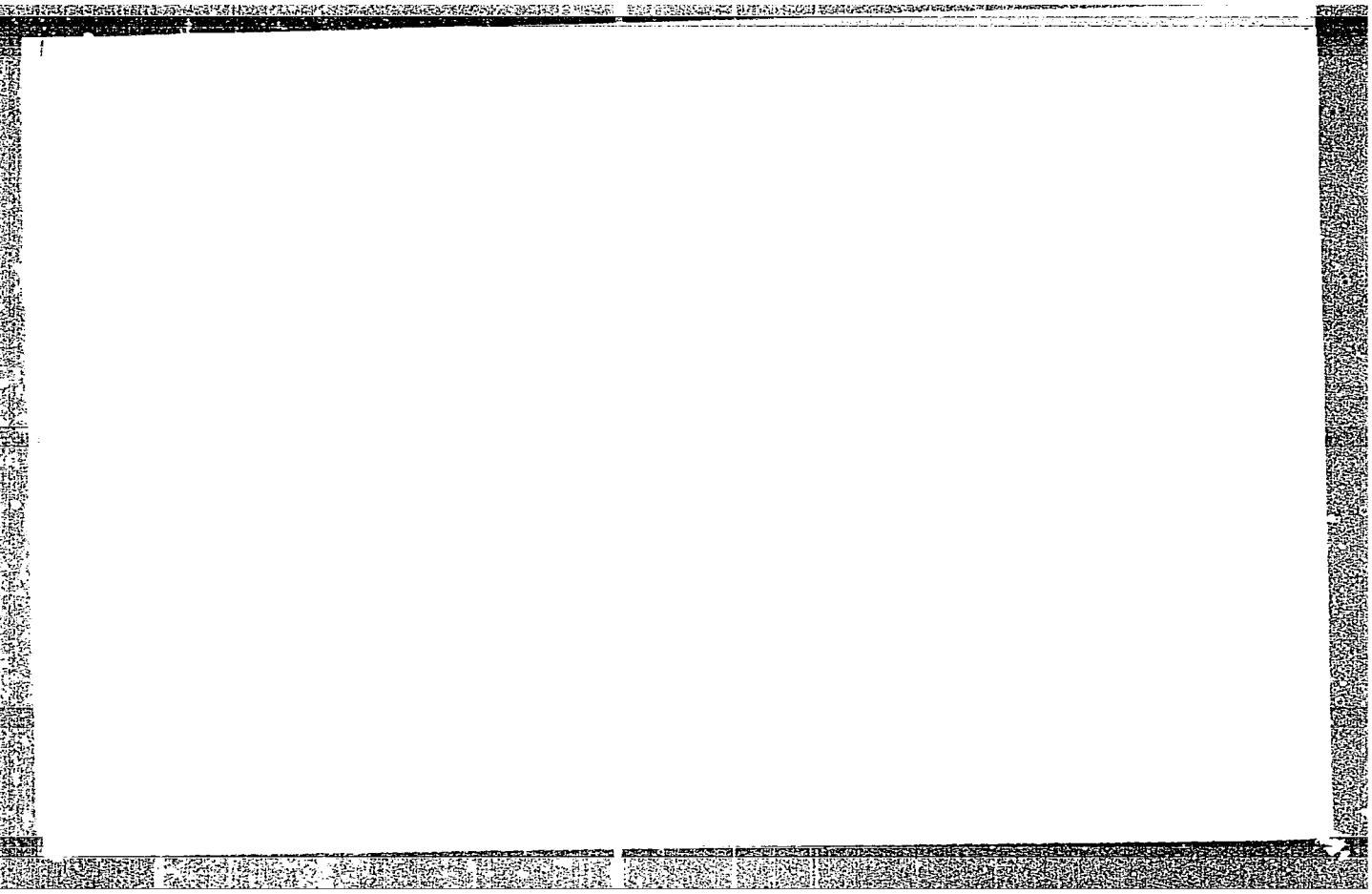
TSYKHANSKIY, T.S.

For further economy of raw materials used in the leather industry.
Leg. prom. 16 no.7:12-14 Jl '56. (MLRA 9:10)

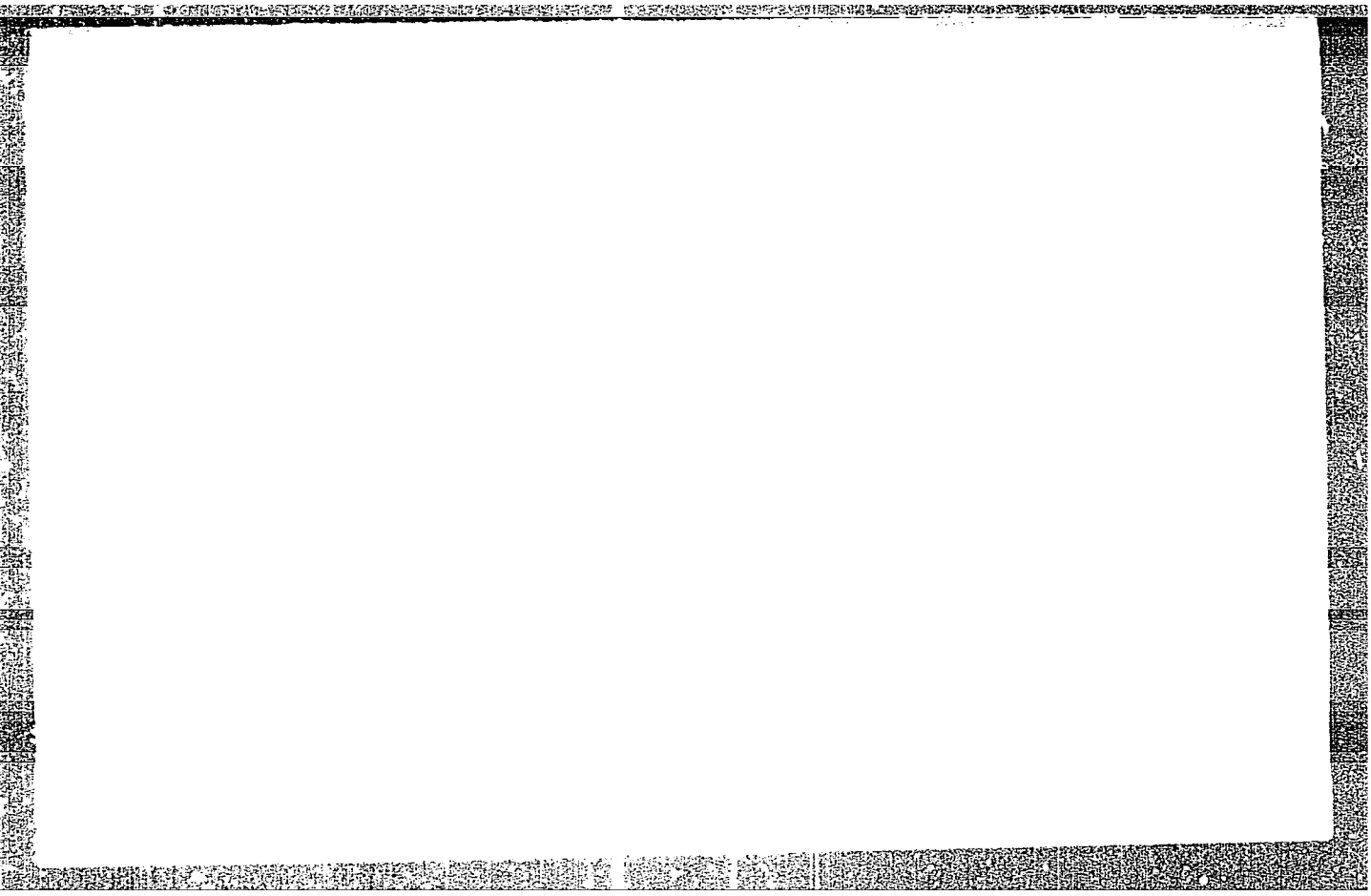
1. Nachal'nik planovo-ekonomicheskogo otdela Rosglavkozh.
(Hides and skins)

KOMISSAROVA, N.V.; TSYKHANSKIY, T.S. [deceased]

New ways for solving problems in curing raw leather. Kozh.obuv. prom. 2 no.3:4-6 Mr '60. (MIRA 14:5)
(Leather)



APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310017-9"



APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001757310017-9"

ACCESSION NR: AP4015150 S/0289/63/000/003/0125/0127

AUTHORS: Tsy*khanskiy, V. D.; Krinberg, I. A.

TITLE: Spectrochemical determination of small amounts of zirconium, niobium, tantalum and hafnium in rock from one batch.

SOURCE: AN SSSR. Sib. otd. Izv., no. 11. Ser. khim. nauk, no. 3, 1963, 125-127

TOPIC TAGS: zirconium, niobium, tantalum, hafnium, analysis, spectral analysis, spectrochemical determination, phenylarsonic acid precipitation, rare earth concentration

ABSTRACT: The Zr, Nb, Ta, and Hf content of ore must be concentrated prior to spectral analysis. The following method gives a 100-300 fold enrichment: the ore is dissolved and the aforementioned metal values and Ti are precipitated with phenylarsonic acid. The precipitate is calcined at 900-1000C. This product containing TiO_2, ZrO_2, Nb_2O_5, Ta_2O_5 and HfO_2 is mixed with powdered carbon (1:4), and consumed in the anode of an electric arc (25 amp). The following lines are used for analytic purposes: Nb--2950.878, Ta--2714.674, Zr--2722.610 and Hf--2866.373 Å. If the concentration of Zr and Nb

Card 1/2

ACCESSION NR: AP4015150

exceeds that of Ta and Hf, less sensitive lines are suggested: Nb--2716.624 and Zr--2699.605 Å. Concentrations in the range of 0.007-0.3% of all four of these elements can be determined by this method within 10-15%. Orig. art. has: 1 Table.

ASSOCIATION: Institut geokhimii, Sibirskogo otdeleniya AN SSSR, Irkutsk (Geochemical Institute, Sibirsk Branch AN SSSR, Irkutsk)

SUBMITTED: 27Jul62 DATE ACQ: 13Mar64 ENCL: 00

SUB CODE: CH NR REF SOV: 008 OTHER: 000

Card 2/2

TSYKHANSKIY, V.D.; KONUSOVA, V.V.

Possibility of determining small amounts of tantalum in rocks by the photometric method. Izv. SO AN SSSR no.3 Ser. khim. nauk no.1:133-135 '65. (MIRA 18:8)

1. Institut geokhimii Sibirskogo otdeleniya AN SSSR, Irkutsk.

S/075/62/017/004/005/006
I017/I242

AUTHORS: Krinberg, I.A., and Tsykhanskiy, V.D.

TITLE: Spectrochemical determination of small amounts of niobium and tantalum in rocks

PERIODICAL: Zhurnal analiticheskoy khimii, v.17, no.4, 1962, 466-470

TEXT: A method is proposed for the determination of niobium and tantalum in granite. The rock is at first enriched chemically by treatment with phenylarsonic acid to precipitate selectively niobium, tantalum and titanium. The enriched products are then analysed spectroscopically. Tantalum is determined by

Card 1/2

S/075/62/017/004/005/006
I017/I242

Spectrochemical determination...

the spectral line Ta 2714.674 and niobium by Nb 2950.878. The determination of niobium and tantalum by this method is possible only if the content of these elements in the rock exceeds 5×10^{-5}%. The error is 7% for niobium and 9% for tantalum. There are 2 figures and 5 tables.

ASSOCIATION: Institut geokhimii Sibirskogo otdeleniya AN SSSR, Irkutsk (Institute of Geochemistry, Siberian Section AS USSR, Irkutsk)

SUBMITTED: June 12, 1961

Card 2/2

[illegible]

Designation of power system components. Elek. stat. 35 no.2:
64-65 F '64. (MIRA 17:6)

VAYNSHTEYN, B.Z., inzhener; GOL'TSMAN, V.G., inzhener; DENKEVITS, E.G., inzhener; TSYKHANSKIY, Yu. L., inzhener; LEBEDEVA, V.I., inzhener.

Replies to N.F.Burzhinskii's article "Articles from protection against electric current." Energetik 4 no.11:11-15 N '56. (MLRA 9:12)

(Clothing, Protective) (Electric engineering--Safety appliances)

TSYKHANSKIY, Yu.L., inzh. (Yaroslavl')

Work post of an attending dispatcher. Energetik 13 no.11: 6-7 N '65. (MIRA 18:11)

SHILKIN, P.M.; ZEL'VYANSKIY, Ya.A.; SIBAROV, Yu.G.; KUSTOV, V.M.; TSYKHMAN, A.I.; KUVSHINOV, M.I.; SHIPAREV, Yu.A.; TYURNIN, G.A.; AVSTREYKH, L.D.; BAKANOV, N.N.; KHITROV, P.A., tekhn. red.

[Safety engineering regulations for operating the contact networks of d.c. electrified railroads]Pravila tekhniki bezopasnosti pri ekspluatatsii kontaktnoi seti postoiannogo toka elektrifitsirovannykh zheleznykh dorog. Moskva, 1962. (MIRA 15:7)
128 p.

1. Russia (1923- U.S.S.R.) Glavnoye upravleniye elektrifikatsii i energeticheskogo khozyaystva. 2. Zamestitel' nachal'nika tekhnicheskogo otdela TsE Ministerstva putey soobshcheniya (for Shilkin). 3. Technicheskiy otdel TsE Ministerstva putey soobshcheniya (for Zel'vyanskiy). 4. TSentral'nyy komitet profsoyuza rabochikh zheleznodorozhnogo transporta (for Sibarov). 5. Nauchno-tekhnicheskiy sovet Ministerstva putey soobshcheniya (for Kustov). 6. Sluzhba elektrifikatsii i energeticheskogo khozyaystva Odesskoy zheleznoy dorogi (for TSykhman). 7. ECh Yuzhno-Ural'skoy zeleznoy dorogi (for Kuvshinov). 8. ECh Moskovskoy zheleznoy dorogi (for Segala, Shiparev, Tyurnin). 9. EChK Oktyabr'skoy zheleznoy dorogi (for Avstreykh). EChK Moskovskoy zheleznoy dorogi (for Bakanov). (Electric railroads—Safety regulations)

TEYKIN, A., polkovnik, kand. istoricheskikh nauk

Immortality of a feat. Kryl. rod. 16 no.6:4-5 Je '65.
(MIRA 18:10)

TSYKIN, A., polkovnik, dotsent, kand. istoricheskikh nauk

The Moscow Guards Regiment. Kryl. rod. 16 no.1:5 Ja '65. (MIRA 18:3)

TSYKIN, A., kand.istorich.nauk, polkovnik

Triumph of life. Kryl.rod. 14 no.6:7 Je '63. (MIRA 16:7)
(World War, 1939-1945--Aerial operations)

TSYKIN, B.S.

KOLOBOVA, M.V., inzh.; TSYKIN, B.S., inzh.

Output of clear pine lumber by sorts. Der. prom. 6 no.10:3-5 O '57. (MIRA 10:11)

1. TSentral'nyy nauchno-issledovatel'skiy institut mekhanicheskoy obrabotki drevesiny.

(Lumber)

KOLOBOVA, M.V., inzhener; TSYKIN, B.S., inzhener.

Effect of the quality of pine log wood upon the grades of lumber materials. Les.prom.14 no.4:29-30 Ap '54. (MLRA 7:4)

1. TSentral'nyy nauchno-issledovatel'skiy institut mekhanicheskoy obrabotki drevesiny. (Lumber--Grading) (Pine)

TSYKIN, B.S., inzhener.

Rapid method of calculating deliveries. Der. prom. 5 no.10: 15-16 O '56. (MLRA 9:11)

1. TSentral'nyy nauchno-issledovatel'skiy institut mekhanicheskoy obrabotki drevesiny.
(Slide rule) (Woodwork)